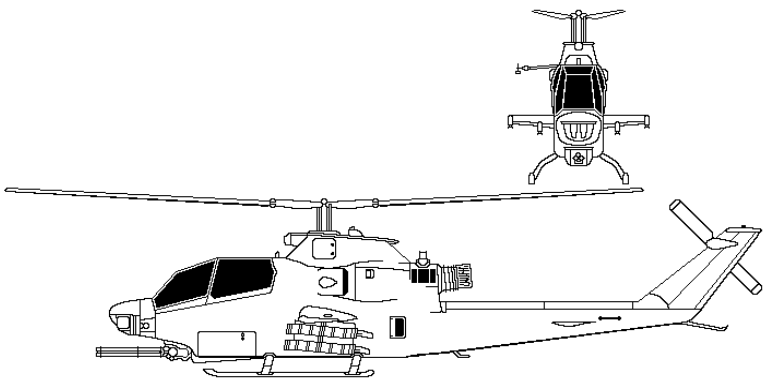



## United States Attack Helicopter AH-1F/COBRA

		<b>Weapon &amp; Ammunition Types</b>  20-mm 3x barrel Gatling gun  <b>Other Loading Options</b>  TOW missile pods (4 each)  2.75-in Hydra 70 rocket pods (19 each)  7.62-mm 6x barrel rotary MG pods	<b>Combat Load</b>  <b>750</b>  <b>0-2</b>  <b>2-4</b>  <b>0-2</b>
<b>SYSTEM</b>  <b>Alternative Designations:</b> Hueycobra, Bell 209 <b>Date of Introduction:</b> 1986 (AH-1S) <b>Proliferation:</b> At least 11 countries  <b>Description:</b> Crew: 2 (pilots in tandem seats) Blades: Main rotor: 2 Tail rotor: 2 Engines: 1x 1,800-shp AlliedSignal Engines T-53-L-703 turboshaft Weight (kg): Maximum Gross: 4,535 Normal Takeoff: 4,524 Empty: 2,993 Speed (km/h): Maximum (level): 315 Cruise: 227 Max "G" Force: 1NA Ceiling (m): Service: 3,720 Hover (out of ground effect): 1NA Hover (in ground effect): 3,720 Vertical Climb Rate (m/s): 8.5 Internal Fuel (liters): 991 Range (km): Normal Load: 610 With Aux Fuel: N/A Dimensions (m): Length (rotors turning): 16.3 Length (fuselage): 13.6 Width (including wing): 3.2 Height: 4.1 Main Rotor Diameter: 13.4 Tail Rotor Diameter: 2.6 Cargo Compartment Dimensions: negligible Standard Payload (kg): 1,544	<b>Survivability/Countermeasures:</b> Infrared signature suppressors mounted on engine exhaust. Radar warning receivers, IFF, Infrared jammer, chaff and flares. Armored cockpit.  <b>ARMAMENT</b> The chin-mounted turret accepts Gatling-type guns ranging from 7.62-mm to 30-mm. Some aircraft have been modified to accept Stinger missiles (air-to-air Stinger or ATAS).  <b>20-mm 3x barrel Gatling gun, M197:</b> Range: (practical) 1,500 m Elevation: 21° up to 50° down Traverse: 220° Ammo Type: AP, HE Rate of Fire: burst 16±4, continuous 730±50  <b>Most Probable Armament:</b> <b>AH-1G:</b> Either 2x 7.62-mm miniguns with 4,000 rounds or 2x 40-mm grenade launchers with 300 rounds (one each is possible) in chin turret. Also on underwing hardpoints, 2.75-in. FFAR, minigun pods, or 20-mm automatic cannons.  <b>AH-1S:</b> M197, 3x barrel 20-mm Gatling gun in chin turret. Also on underwing hardpoints, 8x BMG71 TOW antitank missiles, and 2x 2.75-in FFAR rocket pods.  <b>AVIONICS/SENSOR/OPTICS</b> The TOW missile targeting system uses a telescopic sight unit (traverse 110°, elevation – 60°/+30°), a laser augmented tracking capability, thermal sights and a FLIR to allow for acquisition, launch, and tracking of all types of TOW missiles in all weather conditions.	The Cobra also uses a digital ballistic computer, a HUD, Doppler nav, and a low speed air data sensor on the starboard side for firing, and has in-flight boresighting. Available Israeli-made upgrades include an integrated FLIR with laser rangefinder, GPS, automatic boresighting, and the ability to fire both TOW II and Hellfire missiles.  <b>Night/Weather Capabilities:</b> The AH-1 is fully capable of performing its attack mission in all weather conditions.  <b>VARIANTS</b> Most older Cobra variants still in operation have been upgraded to the AH-1F standard. Also produced in Romania and Japan under license from Bell Textron in the U.S.  <b>AH-1G:</b> Initial production model in 1966  <b>AH-1S:</b> Upgraded 1960s produced aircraft in late 1980s to the standard TOW carrying version.  <b>AH-1P:</b> A set of AH-1S aircraft fitted with composite rotors, flat plate glass cockpits, and NVG capabilities.  <b>AH-1E:</b> A set of AH-1S aircraft upgraded with the Enhanced Cobra Armament System incorporating the universal turret, 20-mm gun, automatic compensation for off-axis gun firing, and weapon management system.  <b>AH-1F:</b> Current standard Cobra. Also referred to as the "Modernized Cobra". Incorporated all past upgrades.  <b>AH-1J/-1T/-1W:</b> See separate AH-1W entry.	

### NOTES

Available munitions are shown above; not all may be employed at one time. Mission dictates weapon configuration. External stores are mounted on underwing external stores points. Each wing has two hardpoints for a total of four stations. A representative mix when targeting armor formations would be eight TOW missiles, two 2.75-in rocket pods, and 750x 20-mm rounds. The gun must be centered before firing underwing stores. Additional missions include direct air support, antitank, armed escort, and air to air combat. Armored cockpit can withstand small arms fire, and composite blades and tailboom are able withstand damage from 23-mm cannon hits and small arms fire. The composite blades and tailboom are able to withstand damage from 23-mm cannon hits.

## United States Attack Helicopter AH-1W/SUPERCOBRA

		<b>Weapon &amp; Ammunition Types</b>	<b>Combat Load</b>
		<b>20-mm 3x barrel Gatling gun</b>  <b>Other Loading Options</b> Hellfire missile pods (4 each) TOW missile pods (4 each) 2.75-in Hydra 70 rocket pods (19 each) Sidewinder or Sidearm missiles External fuel tanks (liters)	<b>750</b>  <b>0-2</b> <b>0-2</b> <b>2-4</b> <b>2</b> <b>291/378</b>
<b>SYSTEM</b>  <b>Alternative Designations:</b> Seacobra, Supercobra, Bell 209 <b>Date of Introduction:</b> 1986 <b>Proliferation:</b> At least 3 countries <b>Description:</b> Crew: 2 (pilots in tandem seats) Blades: Main rotor: 2 Tail rotor: 2 Engines: 2x 1,775-shp General Electric T-700-GE-401 turboshaft Weight (kg): Maximum Gross: 6,700 Normal Takeoff: 6,700 Empty: 4,670 Speed (km/h): Maximum (level): 350 Cruise: 270 Max "G" Force: +2.5 to -0.5 g Ceiling (m): Service: 5,703 Hover (out of ground effect): 915 Hover (in ground effect): 4,270 Vertical Climb Rate (m/s): 4.0 Internal Fuel (liters): 1,150 Range (km): Normal Load: 590 With Aux Fuel: N/A Dimensions (m): Length (rotors turning): 17.7 Length (fuselage): 14.7 Width (including wing): 3.3 Height: 4.2 Main Rotor Diameter: 14.7 Tail Rotor Diameter: 3.0 Standard Payload (kg): 1,740	<b>Survivability/Countermeasures:</b> Infrared signature suppressors mounted on engine exhaust. Radar and laser warning receivers, IFF, Infrared jammer, missile warning system, chaff and flares, and rotor brake. Armored cockpit.  <b>ARMAMENT</b>  <b>20-mm 3x barrel Gatling gun, M197:</b> Range: (practical) 1,500 m Elevation: 21° up to 50° down Traverse: 220° Ammo Type: AP, HE Rate of Fire: Burst 16±4, continuous 730±50  <b>Most Probable Armament:</b> <b>AH-1W:</b> M197, 3x barrel 20-mm Gatling gun in chin turret. Also on underwing hardpoints, 8x TOW or Hellfire antitank missiles (or four of each), and 2x 2.75-in FFAR rocket pods. AIM-9 Sidewinder or AIM-123 Sidearm missiles provide air-to-air capability.  <b>AVIONICS/SENSOR/OPTICS</b>  The missile targeting system uses a telescopic sight unit (traverse 110°, elevation -60°/+30°) with two magnifications/fields of view, a laser augmented tracking capability, TV, video recorder, thermal sights, FLIR, Doppler navigation, and a digital ballistic computer for acquisition, launch, and tracking of all TOW or Hellfire missiles in all weather conditions. The helmet-mounted display integrates NVGs with missile targeting and gun turret. The system allows the aircraft to self-designate targets.	<b>Night/Weather Capabilities:</b> The AH-1 is fully capable of performing its attack and armed escort missions in all weather conditions from land- or sea-based launching platforms.  <b>VARIANTS</b>  Most older AH-1J and AH-1T Seacobra variants still in operation have been upgraded to the AH-1W standard.  <b>AH-1J:</b> Initial twin engine AH-1 variant fielded in the early 1970s.  <b>AH-1T:</b> Upgraded engines and powertrain system for improved performance. This minimally expanded rotor system and over-all dimensions of the AH-1J.  <b>AH-1RO:</b> Construction of a variant of the aircraft may occur in the near future in Romania. Talks are ongoing between IAR industries and Bell Textron. It may be produced under the name "Dracula".  <b>AH-1Z/-1(4B)W:</b> Four-bladed variant called the "King Cobra" or "Viper" that contains an integrated digital cockpit, and has better flight performance.  <b>AH-1P/-1E/-1F:</b> See separate AH-1F entry.	

### NOTES

Available munitions shown above; not all may be employed at one time. Mission dictates weapon configuration. External stores are mounted on underwing external stores points. Each wing has two hardpoints for a total of four stations. A representative mix when targeting armor formations is eight TOW or Hellfire missiles (sometimes four of each missile is loaded), two 2.75-in rocket pods, and 750x 20-mm rounds. The gun must be centered before firing underwing stores. Additional missions include direct air support, antitank, armed escort, and air to air. Armored cockpit can withstand small arms fire, composite blades, tailboom, and fuel tanks withstand 23-mm cannon hits. This aircraft costs approximately \$10.7 million which is considered inexpensive when compared to other modern attack helicopters, but its performance is similar. Therefore many nations consider this aircraft as a possible candidate for fielding in attack helicopter squadrons.